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EXAMINER	
DESIRE, GREGORY M	

ART UNIT	PAPER NUMBER
2625	4

DATE MAILED: 06/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/875,081	FUJIWARA, YOKO	
	Examiner	Art Unit	
	Gregory M. Desire	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 June 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,10 and 11* is/are rejected.

7)☒ Claim(s) *9* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 June 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3, 7-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeshoji et al (6,088,479) in view of Abe et al (5,086,434).

Regarding claim 1 Ikeshoji discloses,

Receiving image data for an image with character images on a background image (note fig. 1 block 10 in connection with col. 2 lines 49-50 and 43-46, scanner receives original drawing which is image data with character image on a background image);

Extracting areas in correspondence to the character images from the image data (note fig. 1 30d, 34 in connection with col. 3 lines 17-20, subtracting process obtaining characters and figure data, examiner interprets as extracting area in correspondence to the character images from image data);

Changing the image data to replace the character image with the background image (The examiner interprets this as merely producing a background image. The image data includes character images on a background image, to change the image data to replace the character image with the background entails removing the character

image producing only a background image as shown in fig.1 block 20d and col. 3 lines13-16);

Storing the changed image data and the character data along with a relationship between them (note col. 3 lines 21-23, lines cites background image and character images are stored in an image file and from the specification page 7 lines 2-5 examiner interprets the relationship between them is the image datum are included in a document, thus combining the changed image data and the character data (note fig. 3 10D-1 in connection with col. 4 lines 5-11, the composer combines the background data and character image data and stores the image data 10D1 in an image file examiner interprets an output of an image file is a document).

Ikeshoji's system extracts areas in correspondence to character images and stores character images along with changed image data. However, Ikeshoji does not generate character code data from extracted data and store character code data. Abe discloses character recognition by the CPU generating character code data (col. 7 lines 49-51), and storing character code data in the image memory (see fig. 1 block 25 and col. 2 lines 59-68). Abe's character recognition discriminates between recognized and unrecognized characters (note col. 7 lines 51-61). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to generate character code from the extracted characters in Ikeshoji. Encoding of characters by character recognition, saves labor, thus reducing time required for communication. Recognized and unrecognized characters are transmitted in code block, reducing the number of blocks, thus reducing communication time (note col. 9 lines 5-21, of Abe).

Regarding claim 2 Ikeshoji discloses,

Complementing character image data based on image data around the character image (examiner interprets this as deleting or removing character image consistent with background image. The examiner uses the specification page 6 lines 11-13, col. 11 lines 21-22 and fig. 9 as reference. Ikeshoji removes the character image producing only a background image as shown in fig.1 block 20d and col. 3 lines13-15).

Ikeshoji system extracts areas in correspondence to character images. However, Ikeshoji does not convert character image data to character code data. Abe discloses character recognition by the CPU converting character code data (col. 7 lines 49-51). Abe's character recognition discriminates between recognized and unrecognized characters (note col. 7 lines 51-61). Therefore it would have been obvious to one having ordinary skills in the art at the time of the invention was made to convert character code from the extracted characters in Ikeshoji. Encoding of characters by character recognition, saves labor, thus reduces time required for communication. Recognized and unrecognized characters are transmitted in code block, reducing the number of blocks. Thus reducing communication time (note col. 9 lines 5-21).

Regarding claim 3 Ikeshoji discloses,

Complementing the character image data based on image data around the character image (examiner interprets complementing as deleting or removing character

image to be consistent with background image the examiner uses the specification page 6 lines 11-13, col. 11 lines 21-22 and fig. 9 as reference. A filter is used in the instant application and Ikeshoji uses a filter to remove the character image producing only a background image as shown in fig.1 block 20d and cited col. 3 lines13-15).

Storing the character data and the image data including the complemented character image data along with the relationship between them (note col. 3 lines 21-23, lines cite background image (complemented character image data and character images are stored in an image file and from the specification page 7 lines 2-5 examiner interprets the relationship between them is the image datum are included in a document, thus combining the complemented image data and the character data (note fig. 3 10D-1 in connection with col. 4 lines 5-11, the composer combines the background data (complemented character image data) and character image data and stores the image data with relationship between10D1 in an image file). The examiner interprets an output of said image file is a document).

Ikeshoji system extracts areas in correspondence to character images and stores character images along with complemented character image data. However, Ikeshoji does not convert image data to character code data. Abe discloses character recognition by the CPU generating character code data (col. 7 lines 49-51), and stores character code data in the image memory (see fig. 1 block 25 and col. 2 lines 59-68). Abe's character recognition discriminates between recognized and unrecognized characters (note col. 7 lines 51-61). Therefore it would have been obvious to one having ordinary skills in the art at the time of the invention was made to convert image

data to character code in Ikeshoji. Encoding of characters by character recognition, saves labor, thus reduces time required for communication. Recognized and unrecognized characters are transmitted in code block, reducing the number of blocks. Thus reducing communication time (note col. 9 lines 5-21).

Regarding claim 7 Ikeshoji discloses,

An extractor (which read on subtractor, note fig. 1 block 120), which extracts character image data in image data (which read on character and figure image fig. 1 block 30d and 34) with character image on a background image (note Ikeshoji fig. 1 block 120, in connection with col. 3 lines 17-23, subtracting process extracts character image data in image data with character image on a background image (fig. 1 block 10);

A deleter (which reads on filter 110) which deletes the character images on the background images on the background image in the image data (note Ikeshoji figure 1 blocks 110 and 20D in connection with col. 3 lines 13-15, the noise removal filter the examiner interprets as a deleter, the image data includes character images on a background image, the noise removal filter deletes the character images on the background image producing a background image);

A synthesizer (which read on composer, fig. 3 block 300), which synthesizes the character data with the image data from which the character image is deleted (note fig. 3, 10D-1 in connection with col. 4 lines 5-11, the composer combines/synthesizes the character data with background data (image data from which the character image is deleted).

Ikeshoji system extracts character images and synthesizes character images along image data with deleted character data. However, Ikeshoji does not convert image data to character code data. Abe discloses character recognition by the CPU converting image data to character code data (col. 7 lines 49-51), and synthesizing character code data resulting in mixed data (col. 2 lines 59-68 and col. 5 lines 27-30). Abe's character recognition discriminates between recognized and unrecognized characters (note col. 7 lines 51-61). Therefore it would have been obvious to one having ordinary skills in the art at the time of the invention was made to convert image data to character code in Ikeshoji. Encoding of characters by character recognition, saves labor, thus reduces time required for communication. Recognized and unrecognized characters are transmitted in code block, reducing the number of blocks. Thus reducing communication time (note col. 9 lines 5-21).

Regarding claim 8 Ikeshoji and Abe (434) discloses,

Wherein said deleter complements the image data at an area of character images on the background image according to image data of an ambient background image of the area (examiner interprets complementing as deleting or removing character image to be consistent with background image, examiner uses the specification page 6 lines 11-13, col. 11 lines 21-22 and fig. 9 for reference. A filter is used in the instant application to complement the image data and Ikeshoji also uses a

filter to remove the character image producing only a background image as shown in fig.1 block 20d and cited col. 3 lines13-15).

3. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeshoji in view of Abe (434).

Regarding claim 10 Ikeshoji discloses,

An extracter that extracts character image data. However, Ikeshoji is silent teaching extracting character by character. Abe discloses extracting character image data character by character (note col. 8 lines 6-10, character recognition is performed character by character). Discriminating recognized and unrecognized characters providing efficient transmission. Therefore it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to extract image data character by character in the system of Ikeshoji. Efficient transmission would have been a desirable feature in the synthesis art due to output functions and Abe recognizes efficient transmission would be expected when extracting character by character in Ikeshoji.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeshoji et al (6,088,479) in view of Abe et al (5,086,434) in further view of Melen (6,151,423).

Regarding apparatus claim 4 Ikeshoji discloses,

A reader (which reads on scanner col. 2 lines 49-50), which reads a document to provide image data thereof (note col. 2 lines; 49-51, scanner reads original drawing which read on documents creating image data 10D);

A corrector (which reads on filter fig. 1 block 110) which changes the character image data to the same as a color of an image around the character image (note col. 5 line 41- col. 6 line 37 and col. 8 lines3-20, examiner interprets changing the character image data to same as a color of an image around the character image as replacing image data brightness of plurality of pixels around it producing a background image, the examiner uses the specification page 6 lines 11-13, col. 11 lines 21-22 and fig. 9 as reference. A filter is used in the instant application and Ikeshoji uses a filter to change the character image data to same as a color image around the character image (note fig. 1D and cited col. 3 lines13-15, the brightness relates to color col. 5 lines 35-65); and

A storage device (image file by processor note col. 3 lines 22-23 and col. 4 lines 10-11), which stores the character code data and the image data including the complemented character image data along with a relationship between them (note col. 3 lines 21-23, lines cite background image (complemented character image data) and character images are stored. The specification page 7 lines 2-5, examiner interprets the relationship between them as the character data and complemented image data (background) being included in a document, thus the complemented image data and the character data are combined (note fig. 3 10D-1 in connection with col. 4 lines 5-11, the composer combines the background data (complemented character image data) and

character image data and stores the image data with relationship between10D1 in an image file). The examiner interprets an output of said image file is a document).

Ikeshoji system extracts areas in correspondence to character images and stores character images along with corrected image data. However, Ikeshoji does not determine character code data from read document and store character code data. Abe discloses character recognition by the CPU determining character code data (col. 7 lines 49-51), and stores character code data in the image memory (see fig. 1 block 25 and col. 2 lines 59-68). Abe's character recognition discriminates between recognized and unrecognized characters (note col. 7 lines 51-61). Therefore it would have been obvious to one having ordinary skills in the art at the time of the invention was made to determine character code from the extracted characters in Ikeshoji. Encoding of characters by character recognition, saves labor, thus reduces time required for communication. Recognized and unrecognized characters are transmitted in code block, reducing the number of blocks. Thus reducing communication time (note col. 9 lines 5-21).

Ikeshoji and Abe are silent determining data on a position in the character image data converted to character code data in the image data. However, Melen includes an acquiring device (which reads on pre-processor note fig. 2 block 225), which determines position data on a position in the character image data converted to character code data in the image data (note col. 4 lines 7-10 and fig. 3 block 302 in connection with col. 7 lines 19-27). Lines cite determining location/orientation from character image data, which is converted to character code data. Therefore it would have been obvious to

one having ordinary skills in the art to include an acquiring device in the system of Ikeshoji as evidenced by Melen. Ikeshoji presents character data from a document and Melen in the same field of endeavor determines position data of character data converted to character code without negatively impacting scanning efficiency, providing correct orientation when scanning (note col. 2 lines 33-36).

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeshoji, Abe (5,086,434) and Melen in further view of Abe et al (6,289,121).

Regarding claim 5 Ikeshoji, Abe (5,086,434) and Melen discloses,

An acquiring device, which determines data, based on the character image data in correspondence to character image in the image data. Ikeshoji, Abe (434) and Melen's device do not determine font and font size. However, Abe 9121) does determine font (fig. 1 block 24) and font size (fig. 1, block 26). Therefore it would have been obvious to one having ordinary skill in the art to determine font and font size in the system of Ikeshoji, Abe (434) and Melen as evidenced by Abe (121). Ikeshoji, Abe (434) and Melen scan data from a document and Abe (121) in the same field of endeavor determines portion of a layout of a document using font and font size (note col. 4 lines 49-55).

6. Claims 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeshoji Abe (5,086,434) and Melen in further view of Koakutsu et al (6,285,459)

Regarding claim 6 Ikeshoji, Abe and Melen discloses,

Printer that performs printing functions. Ikeshoji, Abe and Melen is do not generate print data for printing document images, based on the character code data, position data and image data stored in a storage device. However Koakutsu teaches a processor that generates print data (note col. 4 line 10), based on character code (col. 4 lines 12-13), position data (col. 4 lines 16-18 and image data stored (col. 4 lines 14-15). Therefore it would have been obvious to one having ordinary skills in the art to include a processor generating print data for printing document image based on character code data, position data and image data stored, in the system of Ikeshoji, Abe and Melen as evidenced by Koakutsu. Ikeshoji, Abe and Melen prints a synthesized output data and Koakutsu in the same field of endeavor generates data based on character code data, position data and image stored assisting in selective designation of subset image to minimizing retransmission and providing a high throughput printing (note col. 2 lines 64-67 and col. 3 lines 8-11).

7. Claims 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeshoji and Abe (5,086,434) in further view of Johnson (5,212,739).

Regarding claim 11 Ikeshoji and Abe discloses.

An extracter, which extracts the character image data character by character by character by character, and various methods (Abe col. 8 lines 5-7 and 13-16). However, Ikeshoji and Abe do not specifically disclose an extracter, which extracts the character image in the unit of word. Johnson discloses wherein an initial extraction of a unit word of an image data is performed (note col. 2 lines 53 and fig.9 block 904).

Therefore it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to use a unit of word extracter as method of extracting in Ikeshoji and Abe. Improving recognition of degraded characters of a document have been a highly desirable feature in the character extraction art, due to larger segmented portion and Johnson recognize that a system insensitive to common noise distortion would be expected when word extractor (note fig. 2 lines 20-21) of Johnson is used in the system of Ikeshoji and Abe.

Allowable Subject Matter

8. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter for claim 9. The prior art fails to disclose, wherein a converter does not convert a character image data to character code data when an area of the character image data has color change. The comparison of the color components described in the specification pages 10 and 11, distinguishes over prior that would use binary values in detecting character error. This feature of a conditional converter, wherein the converter does not convert a character image to a character code when a color change is within a character in combination with the other features is not taught in the prior art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory M. Desire whose telephone number is (703) 308-9586. The examiner can normally be reached on M-F (8:30-6:00) Second Monday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gregory M. Desire
Examiner
Art Unit 2625

Gregory Desire

G.D.
June 7, 2004